

**REMARKS/ARGUMENTS**

Claims 1-4, 6-12, 14, 17-19, 22-27, 38-41, 44-46, 48-74, 76-80 are presently pending in the subject application. Claims 1-4, 10, 17-19, 22-24, 38, 39-41, 53, 54-56, 58, 61, 70-74, and 77 have been amended in response to the objections and rejections raised in the office action dated 19 June 2002. Please cancel claims 9, 11, 12, 14, 25-27, 44-46, 48-52, 57, 59, 60, 62-69, 73, 76, and 78-80 without prejudice. Claims 81 and 82 are new. In light of these amendments and the subsequent remarks, reconsideration and withdrawal of the objections and rejections set forth in the Office Action dated 19 June 2002 are respectfully requested. It is respectfully submitted that the amendments to the claims as indicated herein do not add any new matter to this application. Furthermore, amendments made to the claims as indicated herein have been made to improve readability and clarity of the claims.

The applicant thanks the examiner, Stephen M. Johnson, for the telephonic interview, conducted on 17 September 2002, regarding the pending application. During the interview, Michael C. Martensen, an attorney for the applicant, discussed the invention and its distinguishable aspects from the cited art as well as the general nature of the applicant's invention and its applicability to structures other than aircraft. The detachable nature of the fabric was also discussed, as was the spacing between the outer structural layer and the fabric. The examiner specifically recognized claims 1, 17, and 23 of a proposed amendment as adding limitations beyond the previous amendments.

**I. Rejections under 35 U.S.C. §112, second paragraph**

Claims 1-4, 6-12, 14, 17-19, 22-27, 38-41, 44-46, 48-52, 69, 76, and 80 stand rejected under 35 U.S.C. §112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter that the applicant regards as the invention. Specifically, the terms "light weight" and "low weight" in claims 1, 17, 38, 44, 69, 76, and 80 are considered by the examiner as being relative and indefinite.

Independent claims 1, 17, and 38 as amended, particularly point out and distinctly claim what the applicant regards as the invention. The terms "low weight" and "light weight" have been deleted. Accordingly, the applicant respectfully submits claims 1, 17, and 38, as well as their associated dependent claims, are in condition for allowance and requests the rejection be withdrawn.

## II. Rejections under 35 U.S.C. §102

Claims 1-2, 4, 6, 10-12, 14, 17-18, 22, 26-27, 38-41, 44-45, 51-55, 58-64, 76-74, 76 and 80 stand rejected under 35 U.S.C. §102(b) as being anticipated by Meier et al, ("Meier").

Claims 1-2, 4, 6-7, 10-12, 17-18, 22-23, 26-27, 38-41, 44-45, 48, 51-56, 58-60, 62-65, 67-73, 76, and 80 stand rejected under 35 U.S.C. §102(b) as being anticipated by Schade et al, ("Schade").

Claims 1-2, 10-12, 14, 17-18, 26-27, 38-41, 44-45, 51-54, 58-64, 67-74, 76, and 80 stand rejected under 35 U.S.C. §102(b) as being anticipated by Lea.

### A. Independent claims 1, 17, 38, 53, 70, and 81 Include, *inter alia*, a Fabric Capable of Absorbing Kinetic Energy of a Fragment or Projectile Disposed on the Interior of a Vehicle or Structure

The applicant claims a ballistic barrier, compatible with a vehicle or structure having an outer shell that protects objects within the interior of that vehicle or structure from projectiles and fragments. The ballistic barrier is capable of absorbing high amounts of kinetic energy from fragments or projectiles thus preventing the fragments or projectiles from reaching the interior of the vehicle. Various ballistic materials or combinations of these ballistic materials can be used to create one or more layers of the ballistic barrier to increase energy absorbing characteristics. The ballistic barrier is disposed on the interior of the vehicle or structure and placed a finite distance away from the outer shell of the structure.

B. Meier Discloses an Insulation Product for Use as Aircraft Insulation

Meier discloses a lightweight insulation blanket comprised of fibers bonded to a permeable facing sheet. The facing sheet, which is highly permeable, increases the tensile strength of the insulation product and increases its stiffness. See *Meier* col. 2 lines 5-8 and 20-21. The facing material must be permeable so as not to impeded air flow during the manufacturing process of the insulation blanket and offer sufficient tensile strength to remain intact during the fiber collection process. See *Meier* col. 5 lines 15-22. The facing need only possess properties to meet the requirements of the rigors of installation and have a tensile strength of at least three time that of the insulation blank alone and impact resistance of 12 psi. See *Meier* col. 2 lines 45-50. The blanket described in Meier is not a ballistic barrier.

C. Meier Fails to Disclose a Ballistic Barrier Capable of Absorbing Kinetic Energy of a Fragment or a Projectile

Meier fails to disclose every element of the applicant's independent claims. Claims 1, 17, 38, 53, 70, and 81, recites, *inter alia*, a fabric "capable of absorbing kinetic energy of" a foreign body such as a fragment or projectile. Claims 1, 38, 70, and 81 continue by describing the fabric as composed of "one or more ballistic material selected from a group consisting of aramid, polyethylene, and phenylenebenzole". Meier discloses an insulation blanket apparently composed of a glass fiber material having a facing to increase its stiffness and tensile strength sufficient for manufacturing and installation. The porous blanket described in Meier is not a ballistic barrier capable of absorbing the kinetic energy of a fragment or projectile as claimed by the applicant. Furthermore, claims 17 and 53 include, among other limitations, a ballistic barrier having "two or more layers of fabric" wherein one of the layers "is a felt", the felt being positioned between the outer housing or shell of the vehicle and the inner layer. The combination and orientation of the felt in combination with the fabric composed of the aforementioned ballistic material, creates a ballistic barrier. Meier fails to disclose all of the elements claimed by the applicant in independent claims 1, 17, 38, 53, and 70 and accordingly, the applicant submits, does not anticipate the applicant's invention. As

claims 2, 4, 6, 10, 18, 39-41, 54-55, 58, 61, 71, and 74 depend on the aforementioned claim, the applicant submits Meier also fails to anticipate these claims. The applicant respectfully, therefore, requests the rejection be withdrawn.

D. Schade Discloses a Process and Apparatus for Bonding Ceramic Tiles to Armor

Schade discloses an attachment layer that is used to connect ceramic tiles to a structural support layer. See *Schade* col. 1, lines 43-45. The armor includes a covering layer composed of a 2 ply KEVLAR layer adhered to a steel plate using Urelite adhesive. See *Schade* col. 1, lines 43-45. The layer apparently covers ceramic tiles forming the armor that is then attached to a structural support layer. The structural support layer is from part of a military vehicle or building where protection is desirable. See *Schade* col. 2, lines 45-48. Thus, the covering layer composed of the 2 ply KEVLAR layer is outward of the structural layer defining the interior of the vehicle or structure.

E. Schade Fails to Disclose a Ballistic Barrier Disposed in the Interior of the Structure

Schade discloses an inventive attachment layer used to connect a layer of ceramic tiles to the structural support of a vehicle or similar structure. The layer, which includes several plies of KEVLAR, is attached to the exterior of the vehicle. See *Schade* col 2, lines 45-48. The applicant recites in claims 1, 38, 70, and 81, *inter alia*, a ballistic barrier disposed in the "interior" of the vehicle composed of "one or more ballistic material selected from a group consisting of aramid, polyethylene and phenylenebenzole". Claim 17 and 53 further recite, *inter alia*, that one of the layers of fabric is a felt. Schade describes an improved method and apparatus for bonding ceramic tile to armor and does not disclose the use of a felt or fabric layer that is polyethylene. The bonding technique in Schade uses rigid material and is performed on the exterior of vehicles such as tanks and armor personnel carriers. As Schade addresses an application process for ceramic armor, Schade does not disclose the use

of any material other than KEVLAR and specifically does not disclose the use of polyethylene or phenylenebenzole. The applicant's invention of a ballistic barrier uses a flexible fabric disposed on the interior portion of the vehicle or structure. The applicant submits that Schade does not disclose every element of the applicant's invention recited in independent claims 1, 17, 38, 53, and 70 nor those that depend upon them, and thus, does not anticipate the applicant's invention. The applicant, therefore, respectfully requests the rejection be withdrawn.

F. Lea Discloses an Insulation Material that can Unfold and Shield an Opening from Flames in the Event of a Rupture, Crack or Puncture of an Aircraft

Lea discloses an insulation blanket or batt having fire-resistant qualities that is folded into the interior spaces in aircraft wall structures. See *Lea* col. 1, lines 31-35. The insulation batts or blankets are made from materials such as glass wool, cotton, balsa, or other fibrous materials that are generally loose or fluffy in characters. See *Lea* col. 1, lines 63-66. Lea uses conventional insulation material that is improved by the addition of a fire-shielding material. See *Lea* col. 2, lines 19-25. The fire-stop insulation material is placed in a corrugated condition so if a portion of the aircraft is torn completely apart, the blanket at its weakest part by perforation would drape over the open ends of the fuselage. See *Lea* col. 4, lines 50-57. Lea presents a method of installing insulation material in an aircraft wall fuselage structure for obtaining a fire-stop shield by the steps of folding the insulation material in an accordion pleated or corrugated fashion and inserting the pleated material in the wall fuselage space with the pleats alternatively directed towards the interior wall and exterior skin. See *Lea* col. 3, lines 1-6.

G. The Insulation blanket disclosed in Lea Fails to Describe a Ballistic Barrier Capable of Absorbing Kinetic Energy of a Fragment or a Projectile

Lea fails to disclose all of the elements of the applicant's invention. The insulation blanket disclosed in Lea is folded in the wall sections of an aircraft fuselage to provide a fire-stop if the fuselage should rupture, crack or tear. The blanket

disclosed in Lea does not apparently provide any capability to absorb kinetic energy from a fragment or projectile. Lea teaches away from such capability by indicating that the blanket can still perform its fire-stop function upon perforation. As the blanket is apparently perforated at result of a crash or similar event, the blanket does not act as a ballistic barrier nor does it absorb the kinetic energy from a fragment or projectile. The material used in Lea is also dissimilar to that recited by the applicant. Lea's insulation blanket uses material possessing thermal and sound absorbing insulation properties. These materials include cotton, balsa wood pulp, and glass wool. The applicant's use of aramid, polyethylene or phenylenebenzole to create a fabric having the ability to absorb kinetic energy from a fragment or projectile is distinct from Lea's insulation blanket. As Lea fails to disclose every element of the applicant's invention, the applicant respectfully submits that the rejection of independent claims 1, 17, 38, 53, and 70, as well as dependent claims 2, 10, 18, 39-41, 58, 61, 71, and 74 should fail. The applicant respectfully requests the examiner withdraw the rejection.

### **III. Rejections under 35 U.S.C. §103**

Claims 3, 8, 19, 24, 46, 49, and 77-79 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Schade et al in view of Pepin.

Claims 9, 25, 50, and 66 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Schade et al in view of Dragone et al.

#### **A. Pepin Discloses a Rigid Lightweight Panel Capable of Absorbing High-Velocity Projectile or Fragment Impacts**

Pepin discloses a panel, capable of supporting structural loads like any other honeycomb or foam cored sandwich panel, that is also capable of withstanding high-velocity impacts from a projectile or fragment. See *Pepin* col. 1, lines 50-55. The panel is formed of rigid structural facesheets and a hybrid core of rigid rod members which pierce and cross through layers of soft dry, energy-absorbing materials. When the panel is restrained at its edges and is impacted by high-velocity fragments or

projectiles, the high dynamic forces will cause failure of the structural, load-bearing parts in the area of impact letting the projectile or fragment enter the soft core area. See *Pepin* col. 2, lines 30-38. The soft-core area acts to absorb the energy of the projectile preventing the penetration of the panel.

C. Schade in view of Pepin, Teaches Away from the Applicant's Invention

Schade teaches an inventive attachment layer used for combining ceramic tiles to the structural supporting members of a vehicle to form a ballistic barrier. The bonding technique and layer disclosed in Schade are rigid compositions of KEVLAR, Steel, and PVC foam. Pepin also teaches a rigid ballistic barrier. Pepin discloses a lightweight panel having a soft energy-absorbing material sandwiched between two rigid sheets or panels. As combined, Schade and Pepin, fail to disclose a fabric disposed in the interior of a vehicle or structure lacking a rigid structure. Pepin suggests use of soft-energy absorbing material such as KEVLAR and Spectra in the context of a confined rigid support system. Likewise Schade presents a rigid exterior armor of ceramic tiles, steel, and KEVLAR that protect vehicles. The applicant recites in claim 1, *inter alia*, "a fabric disposed on the interior of a vehicle". The fabric is positioned a finite distance from the outer shell but is not rigidly sandwiched between two panels or laminated between steel and ceramic tiles. Nor is the fabric bonded to the outer shell of the vehicle or an inner panel. Both Schade and Pepin teach away from a fabric, or soft energy-absorbing material being used as a ballistic barrier without a rigid structural support. Pepin and Schade apparently dissipate the kinetic energy of a projectile or fragment by transferring the energy from the projectile to a large rigid structure such as panels with cross members or ceramic tiles and steel through a soft energy-absorbing matrix. The applicant removes the limitation of a rigid structural support in an inventive and non-trivial and non-motivated approach to the problem. The applicant respectfully submits that Schade in view of Pepin does not render pending claims 3, 19 or 77 obvious and respectfully requests the rejection be withdrawn.

D. As Combined, Schade and Pepin Fail to Teach the Claimed Invention

Schade and Pepin fail to disclose a fabric positioned a finite distance from an outer shell that is capable of absorbing the kinetic energy of a fragment or projectile. Schade discloses a ceramic armor having two KEVLAR plies apparently bonded between a steel plate and ceramic tiles. Likewise, Pepin discloses a soft energy-



absorbing material sandwiched between two supporting panels. As combined Schade and Pepin fail to disclose all of the limitations of the applicant's invention. The applicant recites in claim 1, 17 and 70, *inter alia*, "a fabric positioned in the interior" of a vehicle or structure at "a finite distance" away from the outer shell. The applicant's invention does not require a bonded or sandwiched structural support as does Schade and Pepin. The independent nature of the fabric increases its versatility and effectiveness without added to unnecessary and debilitating structural weight. As Schade and Pepin do not teach all of the limitations of the applicant's invention, the applicant submits that pending claims 3, 19, and 77 are not rendered obvious by Schade in view of Pepin. The applicant respectfully requests the rejection be withdrawn.

E. Dragone Discloses Body Armor Having at Least Three Sections

Dragone discloses composite body armor having at least three distinct sections. Dragone's armor contains at least one ply having aromatic fibers in a polymeric matrix, at least one ply of a woven plastic and at least one ply of polyolefin fibers, also in a polymeric matrix. See *Dragone* col. 2, line 1-4. The second section is a fabric of woven plastic construction. Dragone goes on to list a number of possible polyolefins and aeromatics such as polybenzoxazole. The three sections of the body armor are arranged in any orientation so long as the body armor contains at least one ply or layer of each of the three layers. See *Dragone* col. 6, lines 52-58. Dragone continues by providing several examples of various configurations of the three layers using various materials. Dragone indicates that the fabrication disclosed is particularly suited for vests, pants, raincoats, gloves, boots, aprons, helmets and the like. See *Dragone*, col. 11, lines 19-23.

F. As Combined, Schade and Dragone Fails to Disclose All of the Elements of the Applicant's Invention, Nor is there Motivation to Combine Schade and Dragone

Schade discloses a ceramic armor used on the exterior of vehicles and structures having an internal layer composed of KEVLAR, steel and ceramic tiles.

Dragone discloses a fabric like body armor having no structural reference. Neither Schade or Dragone disclose a ballistic barrier composed of a fabric positioned on the interior of a vehicle that is a finite distance from an outer shell or wall. While none of claims 9, 25, 50, 57, and 60 remaining pending in the current action, the applicant recognizes that elements of these claims prevail in the pending claims. The applicant recites in claims 1, 17, 38, 53, 70, and 81, *inter alia*, at least one layer of “a fabric in the interior” of the structure “at a finite distance from the outer” shell. Dragone discloses body armor comprising of at least three layers. Schade, as discussed herein, provides a bonded rigid ceramic armor located on the exterior of the structure. Combined, Schade and Dragone do not reveal all of the elements of the applicant's invention.


There is no motivation to combine Schade and Dragone. While Dragone describes various types of material to be used to form the three layers of its body armor, it does not motivate one skilled in the art to place the body armor in the rigid structure described in Schade. Furthermore, there is no motivation, even if the combination would have been suggested, to remove two of the three layers. Dragone teaches exactly the opposite. Dragone indicates the combination of three layers of different fabric compositions and orientations are critical to the success of the body armor. Any combination with Schade would logically suggest a rigid barrier as in Schade with three layers of fabric. The applicant recites in his independent claims, *inter alia*, one or more layers of fabric rather than three or more. Neither Schade nor Dragone offer any motivation to reduce the number of layers described in Dragone with the rigid armor structure of Schade. As the references are improperly combined, the applicant respectfully submits they can not form the basis of a rejection under 35 U.S.C. 103(a).

In view of the foregoing, the amended claims pending in the application comply with the requirements of 35 U.S.C. §§ 102, 103 and 112 and are patentably definite over the prior art. As the present amendment is believed to place the application in condition for allowance, entry of the amendment is proper under 37 CFR §1.116 despite the finality of the outstanding Office Action. Accordingly, a Notice of Allowance

is respectfully requested. If the Examiner believes a telephone conference would expedite prosecution of this application, the Examiner is encouraged to call the undersigned at (650) 838-4406.

Respectfully submitted,  
Perkins Coie LLP

Date: 18 Sep 2002

  
\_\_\_\_\_  
Michael C. Martensen  
Registration No. 46,901

Correspondence Address:  
Perkins Coie LLP  
P.O. Box 2168  
Menlo Park, CA 94026  
Customer No. 22918  
Phone: 838-4300

Appl. No. 09/544,357

**APPENDIX****VERSION WITH MARKINGS TO SHOW CHANGES MADE**

1. (~~ONCE~~ TWICE AMENDED) A ballistic barrier preventing penetration by a foreign body in combination with an outer shell of a vehicle or aircraft, for protecting objects in an interior of said vehicle from damage due to projectile penetration, ~~said the~~ said the outer shell defining ~~said the~~ said the interior of ~~said the vehicle or aircraft,~~ said the ballistic barrier in combination with ~~said the~~ said the outer shell comprising:  
  
at least one layer of fabric disposed in ~~said the~~ said the interior of ~~said the vehicle or aircraft,~~ said the wherein ~~said the~~ said the at least one layer of fabric ~~has a light weight and is capable of absorbing kinetic energy of a fragment munition or projectile the foreign body; and~~  
  
~~said the~~ said the at least one layer of fabric being substantially ~~fixedly~~ positioned towards the interior of the aircraft ~~said with respect to the outer shell and at a finite distance away from said the outer shell, and wherein the at least one layer of fabric is composed of one or more ballistic material selected from a group consisting of aramid, polyethylene and phenylenebenzole.~~  
  
said the at least one layer of fabric comprises a plurality of plies.
2. (~~ONCE~~ TWICE AMENDED) The ballistic barrier as recited in claim 1, wherein ~~said the~~ said the at least one layer of fabric ~~comprises~~ includes a plurality of plies.
3. (~~ONCE~~ TWICE AMENDED) The ballistic barrier as recited in claim 2, wherein one of ~~said the~~ said the plurality of plies is a felt, the felt being positioned outward of the remaining plies with respect to the interior.
4. (~~ONCE~~ TWICE AMENDED) The ballistic barrier as recited in claim 2, wherein at least one of ~~said the~~ said the plurality of plies ~~is comprises~~ includes woven fibers.
5. CANCELLED as being directed to non-elected species.
6. (~~ONCE~~ TWICE AMENDED) The ballistic barrier as recited in claim 1, wherein ~~said the~~ said the at least one layer of fabric ~~comprises a polymer material,~~ is fire resistant.
7. (~~ONCE~~ TWICE AMENDED) The ballistic barrier as recited in claim 1, wherein ~~said the~~ said the at least one layer of fabric ~~comprises aramid material,~~ the at least one layer of fabric is detachably fixed to a frame, the frame being fixed to the outer shell, so that upon impact from the foreign body the at least one layer of fabric tends to detach from the frame.

8. ~~(ONCE-TWICE AMENDED)~~ The ballistic barrier as recited in claim 1, wherein ~~said at least one layer of fabric comprises polyethylene material~~ the foreign body includes projectile or fragment munitions.
9. ~~CANCELLED (ONCE AMENDED)~~ ~~The ballistic barrier as recited in claim 1, wherein said at least one layer of fabric comprises polybenzoxazole material.~~
10. ~~(ONCE-TWICE AMENDED)~~ The ballistic barrier as recited in claim 1, wherein ~~said the vehicle~~ aircraft includes an inner panel, and wherein ~~said the~~ at least one layer of fabric is positioned between ~~said the~~ outer shell and ~~said the~~ inner panel of ~~said the vehicle~~ aircraft.
11. ~~CANCELLED (ONCE AMENDED)~~ ~~The ballistic barrier as recited in claim 1, wherein said vehicle is primarily designed for military applications.~~
12. ~~CANCELLED (ONCE AMENDED)~~ ~~The ballistic barrier as recited in claim 1, wherein said vehicle is primarily designed for transporting at least one of cargo and passengers.~~
13. CANCELLED as being directed to non-elected species.
14. ~~CANCELLED (ONCE AMENDED)~~ ~~The ballistic barrier as recited in claim 1, wherein said vehicle is an aircraft.~~
15. CANCELLED as being directed to non-elected species
16. CANCELLED.
17. ~~(ONCE-TWICE AMENDED)~~ A ballistic barrier in combination with ~~a~~ an outer housing of a structure, the outer housing defining an interior, for protecting objects in ~~said the interior of the structure from damage due to projectile penetration, said the~~ ballistic barrier in combination with said outer housing comprising:  
  
at least one two or more layers of fabric disposed in said the interior of said the structure, the two or more layers of fabric being substantially positioned towards the outer housing of the structure and at a finite distance away from said outer housing of the structure, wherein said at least one layer of fabric is capable of absorbing kinetic energy of a fragment munition or projectile and has a light weight foreign body; and  
  
; and wherein a first of the two or more layers of fabric is a felt, the felt being positioned toward the outer housing of the structure with respect to the other layers of fabric.

- ~~said at least one layer of fabric being substantially fixedly positioned towards said outer housing and at a finite distance away from said outer housing.~~
18. ~~(ONCE-TWICE AMENDED)~~ The ballistic barrier as recited in claim 17, wherein ~~said at least one layer of fabric comprises a plurality of plies~~ at least one of the two or more layers of fabric is composed of one or more ballistic material selected from a group consisting of aramid, polyethylene and phenylenebenzole.
19. ~~(ONCE-TWICE AMENDED)~~ The ballistic barrier as recited in claim ~~18~~ 17, wherein one of ~~said plurality~~ the two or more layers of fabric is fire resistant. ~~of plies is a felt.~~
20. CANCELLED as being directed to non-elected species.
21. CANCELLED as being directed to non-elected species.
22. ~~(ONCE-TWICE AMENDED)~~ The ballistic barrier as recited in claim 17, wherein ~~said at least one layer of fabric comprises a polymer material~~ the structure includes a vehicle.
23. ~~(ONCE-TWICE AMENDED)~~ The ballistic barrier as recited in claim 17, wherein ~~said at least one layer of fabric comprises aramid material~~ the structure includes a structural support disposed between the outer housing and an interior panel, and wherein the fabric is detachably fixed to the structural support such that upon impact from the foreign body the fabric tends to detach from the structural support.
24. ~~(ONCE-TWICE AMENDED)~~ The ballistic barrier as recited in claim 17, wherein ~~said at least one layer of fabric comprises polyethylene material~~ the structure includes an aircraft.
25. ~~CANCELLED(ONCE AMENDED)~~ The ballistic barrier as recited in claim 17, wherein ~~said at least one layer of fabric comprises polybenzoxazole material.~~
26. ~~CANCELLED(ONCE AMENDED)~~ The ballistic barrier as recited in claim 17, wherein ~~said at least one layer of fabric is positioned towards an inner surface of said outer housing of said structure.~~
27. ~~CANCELLED(ONCE AMENDED)~~ The ballistic barrier as recited in claim 17, wherein ~~said at least one layer of fabric is positioned towards an outer surface of said outer housing of said structure.~~
28. CANCELLED.
29. CANCELLED.

- 30. CANCELLED.
- 31. CANCELLED.
- 32. CANCELLED.
- 33. CANCELLED.
- 34. CANCELLED.
- 35. CANCELLED.
- 36. CANCELLED.
- 37. CANCELLED.

38. (~~ONCE TWICE~~ AMENDED) A method for protecting objects in an interior of a ~~vehicle~~ structure from damage ~~due to projectile penetration~~, ~~said the vehicle~~ structure having an outer shell defining ~~said the interior of said vehicle~~ the structure, the method comprising:

positioning at least one layer of fabric in ~~said the interior of said the vehicle~~ structure towards ~~said the~~ outer shell of said the vehicle structure and at a finite distance away from ~~said the~~ outer shell, wherein ~~said the~~ at least one layer of fabric ~~has a low weight and is capable of absorbing a kinetic energy of a fragment of munition or a projectile; and~~

attaching ~~said the~~ at least one layer of fabric to ~~said the vehicle~~ structure such that ~~said the~~ at least one layer of fabric is substantially ~~fixedly~~ positioned towards ~~the interior of the structure with respect to the said~~ outer shell and at a finite distance away from ~~said the~~ outer shell such that upon impact from the fragment or the projectile the fabric tends to detach from the structure, the at least one layer of fabric composed of one or more ballistic material selected from a group consisting of aramid, polyethylene and phenylenebenzole.

39. (~~ONCE TWICE~~ AMENDED) The method as recited in claim 38, wherein ~~said vehicle~~ the structure includes an inner panel, and wherein ~~said the~~ at least one layer of fabric is positioned between ~~said the~~ outer shell and ~~said the~~ inner panel of said the vehicle structure.
40. (~~ONCE TWICE~~ AMENDED) The method as recited in claim 38, wherein ~~said vehicle is primarily designed for military applications.~~ the at least one layer of fabric includes a plurality of plies.

41. ~~(ONCE TWICE AMENDED)~~ The method as recited in claim ~~3840~~, wherein one of the plurality of plies is a felt, the felt being positioned outward of the remaining plies with respect to the interior, ~~wherein said vehicle is primarily designed for transporting at least one of cargo and passengers.~~
42. CANCELLED as being directed to non-elected species.
43. CANCELLED as being directed to non-elected species.
44. ~~CANCELLED.(ONCE AMENDED)~~ A method for protecting objects in a structure from damage due to projectile penetration, said structure having an outer housing, the method comprising:
- ~~positioning at least one layer of fabric in said structure towards said outer housing of said structure and at a finite distance away from said outer housing, wherein said at least one layer of fabric has a low weight and is capable of absorbing a kinetic energy of a fragment of munition or projectile; and~~
- ~~attaching said at least one layer of fabric to said structure such that said at least one layer of fabric is substantially fixedly positioned towards said outer housing and at a finite distance away from said outer housing.~~
45. ~~CANCELLED.(ONCE AMENDED)~~ The method as recited in claim 44, wherein ~~said at least one layer of fabric comprises a plurality of plies.~~
46. ~~CANCELLED.(ONCE AMENDED)~~ The method as recited in claim 45, wherein ~~one of said plurality of plies is a felt.~~
47. CANCELLED as being directed to non-elected species.
48. ~~CANCELLED.(ONCE AMENDED)~~ The method as recited in claim 44, wherein ~~said at least one layer of fabric comprises aramid material.~~
49. ~~CANCELLED.(ONCE AMENDED)~~ The method as recited in claim 44, wherein ~~said at least one layer of fabric comprises polyethylene material.~~
50. ~~CANCELLED.(ONCE AMENDED)~~ The method as recited in claim 44, wherein ~~said at least one layer of fabric comprises polybenzoxazole material.~~
51. ~~CANCELLED.(ONCE AMENDED)~~ The method as recited in claim 44, further comprising ~~positioning said at least one layer of fabric towards an inner surface of said outer housing.~~



52. ~~CANCELLED (ONCE AMENDED) The method, as recited in claim 44, further comprising positioning said at least one layer of fabric towards an outer surface of said outer housing.~~
53. ~~(ONCE TWICE AMENDED) A ballistic fire barrier in combination with a vehicle, the vehicle for protecting objects in having an interior of said vehicle from damage due to fire, said vehicle having an outer shell defining said an interior, said the ballistic fire barrier in combination with said the vehicle comprising:~~  
~~at least one layer~~two or more layers of fire resistant fabric disposed in said the interior of said the vehicle and substantially fixedly positioned towards said the interior of the vehicle with respect to the outer shell of said the vehicle and at a finite distance away from said the outer shell, wherein a first of the two or more layers of fire resistant fabric is capable of absorbing kinetic energy of a fragment or a projectile and a second of the two or more layers of fire resistant fabric is a felt, the second layer being positioned outward of the first layer with respect to the interior of the vehicle.
54. ~~(ONCE TWICE AMENDED) The ballistic fire barrier as recited in claim 53, wherein said at least one of the two or more layer layers of fire resistant fabric comprises~~includes a plurality of plies.
55. ~~(ONCE TWICE AMENDED) The ballistic fire barrier as recited in claim 53, wherein said at least one of the two or more layers layer of fire resistant fabric is composed of one or more ballistic material selected from a group consisting of aramid, polyethylene and phenylenebenzole~~comprises a polymer material.
56. ~~(ONCE TWICE AMENDED) The fire barrier as recited in claim 53, wherein said at least one layer of fire resistant fabric comprises aramid material~~the fire resistant fabric is detachably fixed to a frame disposed between the outer shell and an inner panel such that upon impact from the fragment or the projectile the fire resistant fabric tends to detach from the frame.
57. ~~CANCELLED (ONCE AMENDED) The fire barrier as recited in claim 53, wherein said at least one layer of fire resistant fabric comprises polybenzoxazole material.~~
58. ~~(ONCE TWICE AMENDED) The ballistic fire barrier as recited in claim 53, wherein said the vehicle includes an inner panel, and wherein said the two or more at least one layer of layers of fire resistant fabric is are positioned between said the outer shell and said the inner panel of said the vehicle.~~
59. ~~CANCELLED (ONCE AMENDED) The fire barrier as recited in claim 53, wherein said vehicle is primarily designed for military applications.~~

60. ~~CANCELLED(ONCE AMENDED) The fire barrier as recited in claim 53, wherein said vehicle is primarily designed for transporting at least one of cargo and passengers.~~
61. ~~(ONCE TWICE AMENDED) The ballistic fire barrier as recited in claim 53, wherein said the vehicle is an aircraft.~~
62. ~~CANCELLED(ONCE AMENDED) The fire barrier as recited in claim 53, further including a layer of projectile resistant fabric positioned in said interior of said vehicle for protecting objects in said interior of said vehicle from damage due to projectile penetration.~~
63. ~~CANCELLED(ONCE AMENDED) The fire barrier as recited in claim 62, wherein said layer of projectile resistant fabric is fixedly positioned with respect to said outer shell of said vehicle.~~
64. ~~CANCELLED(ONCE AMENDED) A fire barrier in combination with a structure for protecting objects in said structure from damage due to fire, said structure having an outer shell defining an interior of said structure, said fire barrier in combination with said structure comprising:~~
- ~~at least one layer of fire resistant fabric disposed in said interior of said structure and substantially fixedly positioned towards said outer shell and at a finite distance away from said outer shell.~~
65. ~~CANCELLED(ONCE AMENDED) The fire barrier as recited in claim 64, wherein said at least one layer of fire resistant fabric comprises aramid material.~~
66. ~~CANCELLED(ONCE AMENDED) The fire barrier as recited in claim 64, wherein said at least one layer of fire resistant fabric comprises polybenzoxazole material.~~
67. ~~CANCELLED(ONCE AMENDED) The fire barrier as recited in claim 64, further including a layer of projectile resistant fabric positioned in said interior of said structure for protecting objects in said interior of said structure from damage due to projectile penetration.~~
68. ~~CANCELLED(ONCE AMENDED) The fire barrier as recited in claim 67, wherein said layer of projectile resistant fabric is fixedly positioned with respect to said outer shell of said structure.~~
69. ~~CANCELLED(ONCE AMENDED) A ballistic and fire barrier in combination with a vehicle for protecting objects in an interior of said vehicle from damage due to projectile penetration and fire, said vehicle having an outer shell defining said interior, said ballistic and fire barrier in combination with said vehicle comprising:~~

~~at least one layer of fabric disposed in said interior of said vehicle and substantially fixedly positioned towards said outer shell and at a finite distance from said outer shell, wherein said at least one layer of fabric has a light weight and is capable of absorbing kinetic energy of a fragment munition or projectile, wherein said at least one layer of fabric is at a finite distance away from said outer shell; and~~

~~at least one layer of fire resistant fabric disposed in said interior of said vehicle and substantially fixedly positioned towards said outer shell and at a finite distance away from said outer shell.~~

70. (~~ONCE TWICE~~ AMENDED) A method for protecting objects in an interior of a vehicle from damage and injury ~~due to fire~~, said the vehicle having an outer shell defining said the interior of said the vehicle, the method comprising:

positioning at least one layer of fire resistant fabric in said the interior of said the vehicle towards said the outer shell of said the vehicle with respect to the interior of the vehicle; and

attaching said the at least one layer of fire resistant fabric to said the vehicle such that said the at least one layer of fire resistant fabric is substantially fixedly positioned at a finite distance away from said the outer shell of said the vehicle, the at least one layer of fabric capable of absorbing kinetic energy of a fragment or a projectile and composed of one or more ballistic material selected from a group consisting of aramid, polyethylene and phenylenebenzole.

71. (~~ONCE TWICE~~ AMENDED) The method as recited in claim 70, wherein said the vehicle includes an inner panel, and wherein said the at least one layer of fire resistant fabric is positioned between said the outer shell and said the inner panel of said the vehicle.
72. (~~ONCE TWICE~~ AMENDED) The method as recited in claim 70, wherein said vehicle is primarily designed for military applications, attaching includes allowing the fire resistant fabric to detach from the vehicle upon impact from the projectile or fragment.
73. ~~CANCELLED(ONCE AMENDED) The method as recited in claim 70, wherein said vehicle is primarily designed for transporting at least one of cargo and passengers.~~
74. (~~ONCE TWICE~~ AMENDED) The method as recited in claim 70, wherein said the vehicle is an aircraft.
75. CANCELLED as being directed to non-elected species.

76. ~~CANCELLED(ONCE AMENDED) The method as recited in claim 70, further comprising positioning at least one layer of fabric that has a low weight and is capable of absorbing kinetic energy of a fragment munition or projectile in said interior of said vehicle for protecting objects in said interior of said vehicle from damage due to projectile penetration.~~
77. ~~(ONCE TWICE AMENDED) The method as recited in claim 70, wherein said the at least one layer of fire resistant fabric comprises~~includes two or more plies, a first of the two or more plies being a felt and a second of the two or more plies including woven fibers, the first of the two or more plies being positioned outward of the second of the two or more plies with respect to the interior of the vehicle.
78. ~~CANCELLED(ONCE AMENDED) The fire barrier as recited in claim 53, wherein said at least one layer of fire resistant fabric comprises a fire resistant felt.~~
79. ~~CANCELLED(ONCE AMENDED) The fire barrier as recited in claim 64, wherein said at least one layer of fire resistant fabric comprises a fire resistant felt.~~
80. ~~CANCELLED(ONCE AMENDED) The ballistic and fire barrier in combination with a structure for protecting objects in an interior of said structure from damage and injury due to projectile penetration and fire, said structure having an outer shell defining said interior of said structure, said ballistic and fire barrier in combination with said structure comprising:~~
- ~~at least one layer of fabric disposed in said interior of said structure and substantially fixedly positioned towards said outer shell and at a finite distance away from said outer shell, wherein said at least one layer of fabric has a light weight and is capable of absorbing kinetic energy of a fragment munition or projectile; and~~
- ~~at least one layer of fire resistant fabric disposed in said interior of said structure and substantially fixedly positioned towards said outer shell and at a finite distance away from said outer shell.~~
81. (NEW) A ballistic barrier for protecting objects in an interior of a structure from damage, the structure having an outer shell defining the interior of the structure, the barrier comprising:
- means for absorbing kinetic energy of a foreign body impacting the structure, the structure having at least one layer of fabric positioned in the interior of the structure towards the outer shell of the structure and at a finite distance away from the outer shell, the at least one layer of fabric composed of one or more ballistic material selected from a group consisting of aramid, polyethylene and phenylenebenzole, and wherein upon impact from the

foreign body the at least one layer of fabric tends to detach from the structure.

83. (NEW) A barrier for protecting objects in an interior of a structure from damage, the structure having a frame and an outer shell defining the interior of the structure, the barrier comprising:

at least one layer of fabric disposed in the interior of the structure, the fabric being substantially positioned towards the interior of the structure with respect to the outer shell of the structure and at a finite distance away from the outer shell, wherein the fabric is detachably fixed to the frame so that upon impact from a foreign body the at least one layer of fabric tends to detach from the frame absorbing the kinetic energy of the foreign body.